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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,415	11/15/2000	Phillip D. Bondurant	Waterjet-01-05	3124
32912	7590	04/01/2005	EXAMINER	
HAYWARD A. VERDUN 609 ALDER AVE. NE. BAIN BRIDGE ISLAND, WA 98110			PHAM, HOA Q	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EJC

**Office Action Summary**

Application No.

09/713,415

Applicant(s)

BONDURANT ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 32-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. With respect to the decision on the petition under 37 C.F.R 1.137(b), filed 6/16/04, to revive the present application, the prosecution of the application is opened as below.

#### ***Election/Restrictions***

2. Applicant's election of Group I (claims 1-12 and 29-31) and canceled claims 13-28 in the reply filed on 5/10/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. With respect to the pre-amendment and response to election/restriction filed on 12/5/04, applicant canceled claims 1-31 and added new claims 32-60 which corresponding to claims 1-12 and 29-31. Thus, claims 1-31 have been canceled and claims 32-60 are pending and examined as follow.

#### ***Drawings***

4. The drawing correction filed on 1/7/05 has been approved.

#### ***Specification***

5. The disclosure is objected to because of the following informalities:

a. The copending application data should be updated in page 1 of the present specification.

b. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Correction of the following is required: the limitation "**rotating portion of housing includes the light source and the means for detecting the light focused on the interior surface of the reformer tube**" in claims 43 and 52 are not supported by the specification.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

6. Claims 42, 49, 54 and 59-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 49 and 60 recite the limitation "said high speed operation" in line 2.

There is insufficient antecedent basis for this limitation in the claim.

b. Claims 42 and 59, line 3, the term "may" does not provide a positive limitation.

c. Claim 54 is repeated from claim 53.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 32-36, and 53-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Pryor et al (4,305,661).

Regarding claim 32, Pryor et al discloses a method and apparatus for determining physical characteristics of object and object surface comprises a light source (19), means (15) for focusing the light source on an interior surface (11) of a reformer tube (12), means (22) for detecting reflected light from the light source focused on the interior of the tube; and means for moving the housing (10) through the reformer tube (column 3, lines 39-41).

Regarding claim 33, see column 4, lines 16-20, and column 6, lines 40-43, for a bright ring of light.

Regarding claim 34, Pryor et al teaches the use of a conical reflector (16) (column 3, lines 43-45).

Regarding claims 35, Pryor et al teaches that the reflecting surface (16) is parabolically curved (column 3 line 66 through column 4 line 2).

Regarding claims 36 and 53, see column 7, lines 65-67, for detecting location of the defects.

Regarding claims 55 and 56, see column 4, line 19 for a photodiodes array detector (22).

Regarding claim 57, see column 4, lines 52-55 for different defects.

***Claim Rejections - 35 USC § 103***

9. Claims 37-52 and 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pryor et al in view of Nishimura et al (JP-403075544).

Regarding claims 37, Pryor et al teaches that the sensor received light reflected from the object; therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the optical inspection system so that the scattered light or unwanted light that may enter the optical system, thus increase the signal to noise ration.

Regarding claims 38-39, see column 6, line 1 of Pryor et al for a photodiode array detector.

Regarding claim 40, see column 4, line 52 of Pryor et al for different defects.

Regarding claims 41-42, 49-51 and 58-60, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the basic device of Pryor et al to use a housing that is adapted for use in a reformer tube by preventing chemical interaction with the inside surface of the tube if different kinds of tube are inspected.

Regarding claims 43 and 52, Nishimura teaches different way to produce a ring of light on the surface of the tube by rotating the whole system (30) which includes the light source (21) and the reflecting mirror (31) (see figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention to replace the way of making a ring of light by rotating the whole optical detecting system as taught by Nishimura et al because they are equivalent in function. Substitution one for another is generally recognized as being within the level of ordinary skill in the art.

Regarding claim 44, see claim 37 above.

Regarding claim 45, see column 7, lines 65-67 of Pryor et al for detecting location of the defects.

Regarding claims 46-47, see claims 38-39 above.

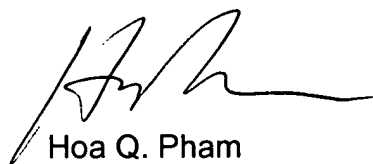
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Following references are relative to bore inspection: Fraignier et al (4,967,092), Drabarek et al (6,462,815), Bieman et al (5,933,231), Cruickshank (5,099,115), West (4,861,984), Pryor et al (4,465,374), Milana (4,440,496), Dan (4,199,258) and Astheimer (3,602,596).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
January 28, 2005